

I CLAIM:

1           \1.     A tire comprising a carcass reinforcement anchored within each  
 2     bead to a bead wire, a crown reinforcement and a tread joined to two beads by means of  
 3     two sidewalls, the axially outer edges of the single mix of the tread being folded over on  
 4     to the radially outer edges of the rubber mixes of the sidewalls, characterized in that the  
 5     circular junction J between the single rubber mix of the tread and the rubber mix of the  
 6     sidewall is positioned such that its radius  $R_C$  on the axially outer wall of the tire lies  
 7     firstly between  $0.9 R_S + 0.1 R_B$  and  $0.8 R_S + 0.2 R_B$  and secondly between  $R_{SS}$  and  $0.9 R_{SS}$   
 8     +  $0.1 R_B$ ,  $R_S$  being the equatorial crown radius of the tread,  $R_{SS}$  the equatorial radius of  
 9     the center line of the carcass reinforcement and  $R_B$  the radius of the bead seat measured  
 10    on the line perpendicular to the axis of rotation of the tire passing through the center of  
 11    gravity of the cross-section of the bead wire.

1           2.     A tire according to Claim 1, characterized in that the circular  
 2     junction J between the mixes in question is close to at least one circumferential groove or  
 3     channel, the mean radius  $R_R$  of which is between  $R_C + 10 \text{ mm}$  and  $R_C - 10 \text{ mm}$ , and the  
 4     depth of which is between 10 and 30% of the total sidewall thickness at the radius  $R_R$ .

1           3.     A tire according to Claim 2, characterized in that the cross-section  
 2     of said groove is semicircular.

- 1                   4.     A tire according to Claim 2, characterized in that the cross-  
2     section of the groove has a form defined by the succession of two arcs of a circle: a  
3     first, radially upper, concave, arc of a circle, of radius  $r$  and of a length of between  
4      $\pi r/2$  and  $\pi r$ , extended tangentially by a second, convex, arc of a circle, the radius of  
5     curvature  $r'$  of which lies between  $r$  and  $R'$ ,  $R'$  being the radius of curvature of the  
6     outer wall of the sidewall measured at the radius  $R_R$ , said second arc of a circle also  
7     being tangent to said outer wall.

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